**Background and Aims:** Splenic artery embolization (SAE) is one of the perspective options for variceal bleeding (VB) prophylaxis. We started widely using SAE in cirrhotic patients since the 2003 year and observed, like many others investigators, restoration of VB risks in terms 3-6 months after the procedure. Modified SAE technique, as well as improved quality check protocol, were introduced into practice in our tertiary GI bleeding center since 2009.

**Method:** We used “solid” technique of SAE for reduction of splenic arterial blood flow in 112 cirrhotic patients with clinically significant portal hypertension (CSPH). In group 1(secondary prophylaxis) were 77 patients who had experienced 1 or more (totally 232, or 3.02 per patient) VB episodes. Group 2 (primary prophylaxis) included 35 patients with non-bleeding varices, but with present ascites and splenomegaly. According to our prospective study design Doppler examinations (with splenic artery (SA) peak systolic (PSV) and diastolic velocity (DV) measurements) were conducted on the baseline and after SAE in 30 days, 3, 6 and 12 months. Additionally, we evaluated the resistive index (RI), spleen volume (SV), recidive rate (RecR) and recidive free period (RFP).

**Results:** In group 1 PSV SA mean according to endpoints (baseline/1m/3m/6m/12m; M cm/s +/-SD) in our study were: 151.38+/-51.037; 86.40+/-32.889; 86.31+/-33.321; 90.80+/-39.380; 96.34+/-40.420) and showed significant decreasing (-55 cm/s, p<0.001) at final EP “12m”. In group 2 we observed the same significant (p<0.001) decreasing of PSV SA mean from 146.40 cm/s (baseline) to 96.17 cm/s (12m). Decreasing of PSV and DV means started at EP “1m” and lasted till EP “12m”. The same tendency was observed in 1 and 2 groups for DV SA (baseline/12m; M+/-SD): 55.69+/-20.645; 36.85+/-14.042 and 57.09+/-18.252; 41.61+/-19.214; respectively, (p<0.001 in both cases). Thus no significant changes were detected in RI estimation on baseline and EP “12 m”: it decreased from 0.62 to 0.60 (gr.1) and from 0.61 to 0.57 (gr.2). Introduction of modified SAE technique resulted first of all in clinical benefit – in group 1 RecR of bleeding episodes dramatically decreased from 3.02 per patient/ year to 0.4. In group 2 (no previous episodes) occurred single VB episode. The average RFP (in days) was 568 in gr.1and 759 in gr.2 respectively. Spleen volume downed from 784 to 519 cm3 in gr.1 and from 1000 to 673 cm3 in gr 2 (p<0.01).

**Conclusion:** Modified (“solid”) SAE could be regarded as reliable secondary and primary prophylaxis option in cirrhotic patients with CSPH due to sustained long lasted (1 year and more) decreasing effect on splenic blood flow. Also, it could be considered as “bridge therapy” in cirrhotic and CLD patients in the waiting list for OTP or undergoing another treatment strategy. At the same time, in our study, RI doesn`t depict the tendency of hemodynamic changes.

**Figure:**